

Claims: In the claims, please amend claims 1, 2, 4, 5, 7, 8, 10, 11, 14, 15, 18, 19, 21, 22, and 23-26. Additions to claims are indicated by underlining. Deletions to claims are indicated by strikeouts. Please cancel claims 16, 17, 20, 27. Upon entry of this amendment, claims 1-15, 18-19, and 21-26 will be pending.

1. (currently amended) An apparatus, comprising:

~~a memory to store compressed color data and decompressed color data;~~  
~~—— a decompressor arranged to receive the compressed color data from the memory and configured to generate the decompressed color data and store the decompressed color data in the memory;~~  
~~—— a color space converter arranged to receive the decompressed color data from the memory and configured to perform a color space conversion on the decompressed color data to form converted color space data; and~~  
~~a halftoning device arranged to receive the converted color space data and configured to perform a halftoning operation to generate halftone data.~~  
a merging device configured to combine decompressed K plane data, including a first plurality of data elements, and a K plane, including a second plurality of data elements, by selecting a largest of corresponding ones of the first plurality of the data elements and the second plurality of the data elements to generate a third plurality of data elements.

2.(currently amended) The apparatus as recited in claim 1, ~~wherein further comprising: the decompressor includes a lossy decompressor.~~

a memory to store compressed color data and decompressed color data;  
a decompressor arranged to receive the compressed color data from the memory and configured to generate the decompressed color data and store the decompressed color data in the memory;  
a color space converter arranged to receive the decompressed color data from the memory and configured to perform a color space conversion on the

decompressed color data to form converted color space data; and

a halftoning device arranged to receive the converted color space data and configured to perform a halftoning operation to generate halftone data.

3.(original) The apparatus as recited in claim 2, wherein:

the compressed color data includes compressed RGB color data.

4.(currently amended) The apparatus as recited in claim 3, wherein:

the converted color space data includes a C plane ,a M plane, a Y plane, and a the K plane.

5. (currently amended) The apparatus as recited in claim 4, wherein: the ~~lossy decompressor includes lossy decompressor~~ decompressor includes a JPEG decompressor.

6.(original) The apparatus as recited in claim 5, further comprising:

a first DMA controller coupled between the memory and the JPEG decompressor and configured to control the transfer of the compressed color data and the decompressed color data between the JPEG decompressor and the memory; and

a second DMA controller coupled between the memory and the color space converter and configured to control the transfer of the decompressed color data between the memory and the color space converter.

7.(currently amended) The apparatus as recited in claim ~~4~~2, wherein:

the compressed color data includes compressed RGB color data.

8.(currently amended) The apparatus as recited in claim 7, wherein:

the converted color space data includes a C plane ,a M plane, a Y plane, and a the K plane.

9. (original) The apparatus as recited in claim 8, wherein:

the decompressor includes a lossy decompressor.

10. (currently amended) The apparatus as recited in claim ~~42~~, further comprising:

a second decompressor arranged to receive compressed K plane data from the memory to generate the decompressed K plane data, where the decompressor corresponds to a first decompressor and the memory includes a configuration to store the compressed K plane data and the decompressed K plane data.

11.(currently amended) The apparatus as recited in claim 10, wherein:

the first decompressor includes a lossy decompressor;

the second decompressor includes a lossless decompressor;

the color data includes RGB color data;

the converted color space data includes a C plane, a M plane, a Y plane, and a the K plane.

12. canceled

13. canceled

14. (currently amended) The apparatus as recited in claim ~~43~~ 11, wherein:

~~the merging device includes a configuration to select a largest of corresponding ones of the first plurality of the data elements and the second plurality of the data elements to generate a third plurality of data elements;~~

~~and the first decompressor includes a JPEG decompressor; and~~

~~the second decompressor includes a FX decompressor.~~

15. (currently amended) ~~The apparatus as recited in claim 13, wherein:~~

~~the merging device includes a configuration to select a smallest, if greater~~

~~than zero, between corresponding ones of the first plurality of the data elements and the second plurality of the data elements to generate a third plurality of data elements;~~

~~the first decompressor includes a JPEG decompressor; and~~  
~~the second decompressor includes a FX decompressor. An~~  
apparatus comprising: a merging device configured to combine  
decompressed K plane data, including a first plurality of data elements, and  
a K plane, including a second plurality of data elements, by selecting a  
smallest, if greater than zero, between corresponding ones of the first  
plurality of the data elements and the second plurality of the data elements  
to generate a third plurality of data elements.

16. (canceled)

17. (canceled)

18. (currently amended) A method, comprising:

~~storing compressed color data in a memory;~~  
~~loading the compressed color data into a decompressor from the memory;~~  
~~generating decompressed color data from the compressed color data;~~  
~~storing the decompressed color data in the memory;~~  
~~loading the decompressed color data into a color space converter from the~~  
~~memory; and~~  
~~performing a color space conversion on the decompressed color data to~~  
~~generate converted color space data.~~

receiving decompressed K plane data, including a first plurality of data  
elements, and a K plane, including a second plurality of data elements; and  
combining the K plane and the decompressed K plane data by selecting a largest  
of corresponding ones of the first plurality of the data elements and the second  
plurality of the data elements to generate a third plurality of data elements.

19.(currently amended) The method as recited in claim 18, further comprising:  
storing compressed K plane data in the memory;  
loading the compressed K plane data into a ~~second~~ decompressor from  
the memory ~~where the decompressor corresponds to a first decompressor~~;  
generating the decompressed K plane data from the compressed K plane  
data; and  
storing the decompressed K plane data in the memory.

20. (canceled)

21.(currently amended) The method as recited in claim 20 19, ~~further comprising~~  
wherein:

the combining the decompressed K plane data and the K plane occurs in  
a merging device.

22.(currently amended) An electrophotographic printer ,comprising:

a photoconductor; a photoconductor exposure system configured to form  
a latent electrostatic image on the photoconductor according to a drive signal;

a transition placement device coupled to the photoconductor exposure  
system and configured to provide the drive signal responsive to pulse codes;

a memory to store compressed color data and decompressed color  
data;

a decompressor arranged to receive the compressed color data from the  
memory and configured to generate the decompressed color data ;

a color space converter arranged to receive the decompressed color data  
from the memory and configured to perform a color space conversion on the  
decompressed color data to form converted color space data including a C  
plane, a M plane, a Y plane, and a K plane; and

a merging device configured to combine decompressed K plane data,

including a first plurality of data elements, and the K plane, including a second plurality of data elements, by selecting a largest of corresponding ones of the first plurality of the data elements and the second plurality of the data elements to generate a third plurality of data elements; and

~~a halftoning device arranged to receive the converted color space data~~  
~~and configured to perform a halftoning operation to generate the pulse codes~~  
using the C plane, the M plane, the Y plane, and the third plurality of data elements.

23. (currently amended) The imaging device as recited in claim 22,  
wherein:

the compressed color data includes RGB data;  
~~the converted color space data includes a C plane, a M~~  
~~plane, a Y plane, and a K plane; and~~  
the decompressor includes a lossy decompressor.

24.(currently amended) The imaging device as recited in claim 23, further  
comprising:

a lossless decompressor arranged to receive compressed K plane  
data from the memory and to generate the decompressed K plane data; ~~and~~  
~~—— a merge device configured to combine the decompressed K plane~~  
~~data and the K plane.~~

25. (currently amended) The imaging device as recited in claim 24, wherein:

the lossy decompressor includes a JPEG decompressor;  
~~—— and the lossless decompressor includes a FX decompressor.~~

26.(currently amended) An electrophotographic printer, comprising:

a photoconductor drum;  
a photoconductor exposure system configured to form a latent

electrostatic image on the photoconductor according to a drive signal;

a pulse width modulator coupled to the photoconductor exposure system and configured to provide the drive signal responsive to pulse codes;

a memory to store compressed RGB data, decompressed RGB data, compressed K plane data, and decompressed K plane data;

a first decompressor arranged to receive the compressed RGB data from the memory and configured to generate the decompressed RGB data

a first DMA controller configured to control the transfer of the compressed RGB data and the decompressed RGB data between the memory and the first decompressor;

a second decompressor arranged to receive the compressed K plane data from the memory and configured to generate the decompressed K plane data;

a second DMA controller configured to control the transfer of the compressed K plane data and the decompressed K plane data between the memory and the second decompressor;

a color space converter arranged to receive the decompressed RGB data from the memory and configured to perform a color space conversion on the decompressed color data to form a C plane, a M plane, a Y plane, and a K plane;

a third DMA controller configured to control the transfer of the decompressed color data from the memory to the color space converter;

a merging device arranged to receive the decompressed K plane data, including a first plurality of data elements, and the K plane, including a second plurality of data elements, and configured to combine the decompressed K plane data and the K plane to form a merged K plane by selecting a smallest, if greater than zero, between corresponding ones of the first plurality of the data elements and the second plurality of the data elements to generate a third plurality of data elements included in the merged K plane;

a halftoning device arranged to receive the C plane, the M plane, the Y plane, and the merged K plane and configured to perform a halftoning

operation to generate the pulse codes.

27. (canceled)